Horticulture Series 449

December, 1977

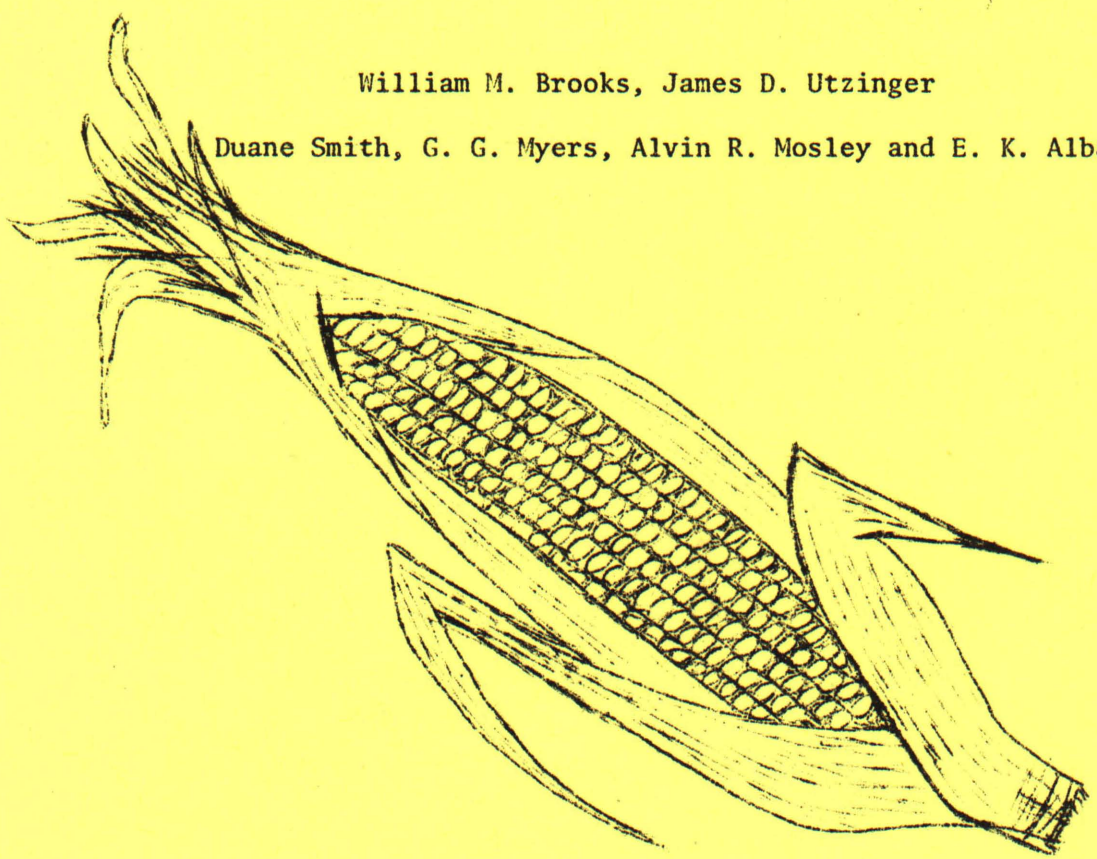
1977 EVALUATION OF SWEET CORN CULTIVARS - COLUMBUS

1000 West Lane Avenue

Columbus, Ohio

William M. Brooks, James D. Utzinger

Duane Smith, G. G. Myers, Alvin R. Mosley and E. K. Alban



DEPARTMENT OF HORTICULTURE

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER

WOOSTER, OHIO

This page intentionally blank.

1977 Evaluation of Sweet Corn Cultivars - Columbus

William M. Brooks[1], James D. Utzinger[1], Duane Smith[1], E. K. Alban[1], Gerald G. Myers[1] and Alvin R. Mosley[2]

The 1977 sweet corn cultivar trials at The Ohio State University Horticultural Farm, 1000 West Lane Avenue, Columbus, consisted of twenty-eight cultivars which were replicated four times and seventy cultivars in non-replicated, single plots.

Corn was seeded on May 9, 1977, in 36" rows with hills spaced 18" apart. Single row plots of 21 hills were 31.5' long. Blocks and tiers of plots were separated by a distance of six feet. Guard rows were planted to the east and west sides of rows running north and south with guard hills across the north and south ends of the entire planting. In addition to the other guard rows, 4 rows of an early maturing and a late maturing cultivar were planted on both the east and west sides of the entire planting of plots to enhance pollination. All plots were planted by hand jabber with 4 kernels per hill. Plants were thinned to 2 plants per hill at the 2 to 3 leaf stage.

Prior to plowing, 12-12-12 fertilizer was applied broadcast at the rate of 1000 pounds per acre. There was also 250 pounds 6-24-12 placed 2 inches to the side and 2 inches below the seed at planting time. No additional fertilizer was applied during the season. Ramrod herbicide was applied, immediately after planting, at 5 pounds active ingredient per acre and watered in with sprinkler irrigation. No insecticides or fungicides were applied after planting. Most lots of seed had been treated with a fungicide and/or an insecticide. Two replications of the replicated plots were given an additional treatment of Vitavax 200. Irrigation was used throughout the season as needed.

---

[1]Department of Horticulture, The Ohio State University, 2001 Fyffe Court, Columbus, Ohio 43210

[2]Department of Horticulture, OARDC, Wooster, Ohio 44691

The following information on temperature and rainfall was obtained from the official records of the United State Weather Bureau at the Port Columbus International Airport

Weather Data

Month	Average Temperature (^{o}F)	Total Rainfall (inches)	Above or Below Normal (inches)
April	54.8	4.04	0.33
May	66.8	.95	- 3.15
June	67.5	4.02	- 0.11
July	76.2	2.52	- 1.69
August	72.0	4.76	1.90

Listed below are the seed companies which generously supplied the seed for these trials without charge:

Code	Company
A-1	Agway, Inc., Buffalo, N.Y. 14240
A-2	Asgrow Seed Co., Kalamazoo, MI 49001
F-2	Ferry-Morse Seed Co., Mountain View, CA 94042
H-1	Joseph Harris Co., Rochester, N.Y. 14624
L-1	Letherman's Inc., Canton, OH 44707
N-1	Northrup, King & Co., Minneapolis, MN 55413
N-2	FMC Corporation, ADC, Modesta, CA 95618
R-1	Robson Seed Farms, Corp., Hall, N.Y. 14463
R-2	Rogers Brothers Co., Idaho Falls, ID 83401
S-1	Stokes Seeds Inc., Box 548, Buffalo, N.Y. 14240
S-2	Schlessman Seed Co., Milan, Ohio 44846
S-3	Seedway Inc., Hall, N.Y. 14463
T-1	Otis S. Twilley Seed Co., Salisbury, MD 21801

The first harvest was made on July 15 and the last harvest was made on August 10. Seneca Pathfinder, Seneca Star and Aztec were all harvested on the first day of harvest. The highest yielding cultivars in the replicated plots (Table 1) based on dozens of marketable ears harvested per acre were Seneca RXP-214 and W9625, with over 2,000 dozen ears per acre.

The Aztec variety was the highest producing early variety but not significantly higher than other varieties harvested at the same time. Cherokee was the highest producing variety in the group harvested after 77 days from planting. Seneca RXP-214 and W9625 both produced over two thousand dozen ears per acre in the group harvested 80 days from planting (usually considered the main season group). Merit had the heaviest unhusked ears in the trial and Silver Queen had the longest husked ears. Resister had the largest diameter of the husked ears. Commanche had over 90 percent of its ears that were marketable.

In the non-replicated plots NCX-2012, WH-126, Kandy Corn, 75-2084, Cherokee, WH-616 and WH-106 all produced over 2,000 dozens per acre. Hallmark had the heaviest unhusked ear.

There were no special insect or disease problems during the year.

This page intentionally blank.

Table I - Replicated Trial: Yield and Other Characteristics of Sweet Corn Cultivars

Variety and Source*		Days to First Harvest	Marketable Yield/A			Average Wt. of Mkt.Ears Unhusked (lbs.)	Average Length of Ears Husked (in.)	Average Diameter of Ears Husked (in.)	Ear Worms %	Ear Smut %
			Dozens of Ears	Wt. (tons)	Percent					
Aztec	A-2	67	1,700	5.31	81	.52	7.35	1.5	0	1.0
Seneca Star	R-1	67	1,479	5.32	71	.60	7.7	1.55	2.0	.6
Seneca Pathfinder	R-1	67	1,344	4.03	81	.50	7.3	1.4	0	2.0
Harmony	H-1	68	1,498	5.14	77	.57	7.4	1.6	0	11.5
Commanche	A-2	72	1,632	5.74	92	.59	7.7	1.5	.6	.6
Beacon	R-2	72	1,469	6.79	87	.77	7.0	1.7	0	3.3
WH115	H-1	73	1,642	6.34	76	.64	7.2	1.8	.6	1.8
70-2070	R-2	74	1,604	6.12	80	.64	8.0	1.6	0	2.4
Cherokee	A-2	77	1,988	7.10	87	.60	8.2	1.5	.5	.5
Gold Winner	H-1	77	1,604	6.32	81	.66	8.0	1.5	0	0
Seneca RXP-214	R-1	80	2,343	9.66	87	.69	4.8	1.4	4.0	0
W9625	H-1	80	2,055	7.59	75	.62	8.4	1.6	6.0	0
Silver Sensation	S-2	80	1,911	7.06	71	.62	7.8	1.5	.5	.5
H445	H-1	80	1,815	6.38	75	.59	7.7	1.6	.5	.5
YW1465	H-1	80	1,728	7.49	88	.72	8.5	1.7	0	0
Sugar Loaf	N-1	80	1,652	6.29	68	.63	7.8	1.8	6.4	0
Merit	A-2	80	1,594	8.47	81	.89	8.5	1.9	4.2	.6
Jubilee	R-2	80	1,575	6.41	74	.68	7.8	1.8	6.7	1.2
Resister	N-2	80	1,546	7.60	88	.82	9.5	1.9	0	0
RXP-218	L-1	80	1,536	7.08	85	.77	7.5	1.2	2.5	0
Seneca RXP-223	R-1	81	1,719	7.64	88	.74	7.9	1.7	6.7	1.0
Sweet Sue	H-1	81	1,623	6.70	89	.69	8.2	1.7	.6	0
Capitan	A-2	81	1,536	6.57	78	.71	8.6	1.65	3.8	.6
Commander	A-2	81	1,258	6.15	71	.81	8.6	1.65	11.5	.8
Epic	N-2	83	1,488	7.01	81	.79	8.3	1.85	3.2	1.3
Silver Queen	R-2	85	1,479	5.53	66	.62	9.55	1.7	9.7	2.0
WH1235	H-1	85	1,258	4.75	63	.63	7.7	1.6	8.4	13.0
Sensation 95	S-2	87	807	3.72	52	.77	9.1	1.7	31.0	0
LSD 5%			480	1.99						

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest listed first within maturity.. See Page 2 for sources.

This page intentionally blank.

Table 2 - Non-Replicated Observation Plots: Yield and Other Characteristics of Sweet Corn Cultivars

Variety and Source*		Days to First Harvest	Marketable Yield/A			Average Wt. of Mkt.Ears Unhusked (lbs.)	Average Length of Ears Husked (in.)	Average Diameter of Ears Husked (in.)	Ear Worms %	Ear Smut %
			Dozens of Ears	Wt. (tons)	Percent					
Seneca Pathfinder	L-1	67	1,308	4.72	88	.60	7.3	1.6	0	0
Carmelet	S-3	71	1,536	6.6	86	.72	8.3	1.7	0	0
NCX 2012	N-2	72	2,380	9.48	92	.66	7.7	1.8	0	0
WH 126	H-1	72	2,036	7.6	70	.62	7.6	1.7	0	17.0
Sugar Daddy	F-2	72	1,804	6.04	82	.56	8.3	1.5	0	0
Ruby Gem	S-3	72	1,728	5.08	94	.49	7.1	1.5	0	4.4
NCX 2019	N-2	72	1,612	5.4	76	.56	7.0	1.7	0	0
EB 405	H-1	72	1,652	6.88	82	.70	7.5	1.7	0	0
71-1805	R-2	72	1,576	6.8	78	.72	8.2	1.7	0	2.4
Reliance	N-1	72	1,576	6.28	89	.67	7.8	1.7	0	0
Buttercorn	A-1	72	1,460	4.0	92	.46	7.0	1.6	0	2.6
Fanfare	R-2	72	1,420	6.32	67	.74	8.5	1.8	0	10.8
NCX-2015	N-2	72	1,308	4.92	64	.63	7.5	1.7	0	23.5
EXP EM12	S-3	72	1,076	3.64	84	.56	7.7	1.7	0	10.7
NCX 2016	N-2	72	1,000	3.88	56	.65	8.1	1.7	0	0
Earlivee	S-1	72	1,000	3.56	66	.60	7.1	1.7	0	3.3
3244	N-1	72	884	3.16	74	.60	7.5	1.7	0	0
Kandy Corn	S-1	73	2,420	9.72	83	.67	8.8	1.5	0	0
Sugar Dots	F-2	73	1,268	4.36	84	.57	7.5	1.6	0	0
75-2084	R-2	74	2,612	9.72	92	.62	9.1	1.6	0	0
Cherokee	L-1	74	2,536	9.12	83	.60	8.2	1.6	0	1.5
Honey Comb	N-1	74	1,960	7.4	91	.63	8.2	1.7	0	0
YW475	H-1	74	1,920	7.8	89	.68	8.1	1.6	4.0	0
YW106	H-1	74	1,884	7.2	71	.64	8.0	1.6	4.0	4.0
Target A	F-2	74	1,844	8.28	73	.75	8.6	1.8	0	12.5
XP 2500	A-2	74	1,844	8.68	93	.78	8.4	1.7	0	0
75-1961	R-2	74	1,804	8.48	69	.78	8.4	1.7	2.1	0
H745	H-1	74	1,576	6.4	85	.68	8.1	1.6	0	4.9
XP 2500	L-1	74	1,576	6.44	88	.68	8.3	1.6	0	2.4
66-2327	R-2	74	1,536	6.48	75	.71	8.2	1.6	7.5	2.5
EXP LM8	S-3	74	1,192	4.0	71	.56	8.2	1.5	6.5	12.9
Starlet	S-3	75	1,728	7.0	92	.67	8.6	1.6	0	0
70-2049	R-2	75	1,692	5.4	82	.53	7.5	1.6	0	0
Pageant	R-2	76	1,500	5.56	62	.62	7.9	1.6	0	2.6
PSU ADX	A-1	78	768	2.84	55	.62	**	**	5.0	0
Gold Cup	H-1	79	1,576	5.48	83	.58	7.7	1.4	0	0
Seneca RXP 218	R-1	79	844	3.72	74	.74	7.7	1.9	0	0

This page intentionally blank.

Table 2 - Non-Replicated Observation Plots: Yield and Other Characteristics of Sweet Corn Cultivars (Cont.)

Variety and Source*		Days to First Harvest	Marketable Yield/A			Average Wt. of Mkt.Ears Unhusked (lbs.)	Average Length of Ears Husked (in.)	Average Diameter of Ears Husked (in.)	Ear Worms %	Ear Smut %
			Dozens of Ears	Wt. (tons)	Percent					
Hallmark	N-2	80	1,228	6.92	77	.94	8.6	2.0	3.1	0
Stylepak	F-2	80	1,076	5.28	67	.82	8.7	1.8	25	0
Seneca Chief	R-1	80	960	3.16	69	.55	7.6	2.3	4.0	4.0
WH616	H-1	81	2,344	9.32	80	.66	8.0	1.55	1.6	1.6
WH106	H-1	81	2,304	8.6	81	.62	9.3	1.7	1.6	1.6
WH116	H-1	81	1,920	8.16	68	.71	8.5	1.9	2.0	2.0
Patriot	R-2	81	1,920	8.4	67	.73	8.4	1.8	6.0	8.0
71-2287	R-2	81	1,920	7.76	76	.67	8.4	1.8	0	0
Silver Treat	A-1	81	1,884	9.04	73	.80	9.2	1.9	2.0	0
Seneca RXP 201	R-1	81	1,804	6.64	81	.61	7.8	1.7	0	0
72-2945	R-2	81	1,728	7.36	75	.71	8.2	1.6	2.2	0
W9315	H-1	81	1,652	5.68	74	.57	8.13	1.65	11.6	0
71-2291	R-2	81	1,612	6.56	72	.68	8.5	1.9	2.4	2.4
Midway	A-2	81	1,576	6.08	66	.64	8.3	1.7	4.9	0
XP 370	A-2	81	1,460	6.04	63	.69	8.5	1.7	0	5.3
YW 1865	H-1	81	1,420	6.56	89	.77	8.1	1.85	0	0
74-3044	R-2	81	1,420	6.56	61	.77	8.3	1.8	2.7	2.7
W7015	H-1	81	1,420	6.16	70	.72	8.35	1.8	10.8	0
EXP MK9	S-3	81	1,308	5.12	43	.65	8.4	1.8	11.8	0
69-2588	R-2	81	1,308	5.6	68	.71	9.1	1.75	17.6	2.9
EXP LM11	S-3	81	1,192	4.04	64	.57	8.9	1.5	3.2	6.5
Seneca RXP 217	R-1	81	1,152	4.76	74	.69	7.1	1.9	6.7	0
74-3045	R-2	81	1,112	4.72	36	.71	8.0	1.7	82.8	13.8
Resister	L-1	81	1,076	5.24	50	.81	8.4	1.9	21.4	0
Comet	A-2	81	1,076	4.72	80	.73	8.2	1.8	17.9	0
Wintergreen	A-2	81	808	4.2	56	.87	7.95	1.7	0	0
NCX 2016A	N-2	81	728	2.92	64	.66	7.6	1.8	0	0
3272	N-1	81	536	2.04	54	.63	**	**	35.7	0
2583	N-1	81	536	2.4	40	.75	**	1.7	50.0	0 0
Golden Sweet Everlasting Heritage	S-1	84	1,576	5.88	72	.62	8.85	1.55	2.4	0
White Delight	T-1	85	1,884	6.72	68	.60	8.7	1.4	6.1	4.0
Silver Queen	R-2	85	576	2.4	60	.70	**	**	0	0

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest listed first within maturity. See Page 2 for sources.
**Data lost.

This page intentionally blank.

FIVE YEAR SUMMARY OF REPLICATED SWEET CORN VARIETY TRIALS (DOZENS OF MARKETABLE EARS/A)-COLUMBUS

Cultivar	1973	1974	1975	1976	1977
Apache	-	2371	2362	1629	-
Aztec	-	-	-	1696	1700
Beacon	-	-	-	1206	1469
Bellringer	-	2176	1508	1381	-
Bonanza	1536	-	1450	1277	-
Bravo	1440	-	-	-	-
Butter & Sugar	-	1873	1863	-	-
Capitan	-	2488	2077	-	1536
Cherokee	-	-	-	-	1988
Comanche	-	-	1613	-	1632
Comet	-	-	-	1527	-
Commander	-	1044	-	-	1258
E-4230	-	-	-	1198	-
Earlibelle	-	-	-	1627	-
Earliking	1392	-	1325	-	-
Eastern Belle	-	-	-	1248	-
Epic (NCX-2004)	-	-	-	1306	1488
EXP 2503	-	-	1489	-	-
Fanfare	-	-	1316	1224	-
FM Cross	-	1317	-	-	-
Glacier	-	1044	-	-	-
Gold Crown	1988	-	-	-	-
Gold Cup	1546	2273	2199	1839	-
Gold Shipper	1642	-	-	-	-
Gold Winner	1565	-	-	-	1604
Golden	1364	-	-	-	-
Goldenrod	1527	-	-	-	-
Golden Earlipak	-	1181	-	-	-
Golden Queen	1229	-	-	-	-
Golden Sensation	-	1385	-	-	-
Grand Master	-	1659	-	-	-
H 445	-	-	-	-	1815
Hallmark	-	-	-	1344	-
Harmony	-	1883	1152	-	1498
Honey Cross	1287	-	-	-	-
JL 49	-	-	1527	-	-
Jubilee	-	-	-	-	1575
Merit	1690	-	1498	1454	1594
Midway	1853	-	-	-	-
Moonglow	-	1483	-	-	-
NK 199	-	-	-	1059	-

Cultivar	1973	1974	1975	1976	1977
Northern Belle L	1623	-	-	-	-
Polarvee	864	-	-	-	-
Preview	-	1590	-	-	-
Reliance	-	-	-	1123	-
Resister	-	-	-	1558	1546
Royal Crest	1152	791	979	-	-
RXP 193	-	-	-	856	-
RXP 218	-	-	-	-	1546
Salute	-	-	-	855	-
Seneca 60-11	1095	-	-	-	-
Seneca Pathfinder	-	-	-	-	1344
Seneca RXP 214	-	-	-	-	2343
Seneca RXP 223	-	-	-	-	1719
Seneca Scout	1277	-	-	1462	-
Seneca Star	1450	1346	1604	-	1479
Sensation 95	-	-	-	-	807
Silver 'n' Gold Sensation	-	1532	-	-	-
Silver Queen	1786	1893	-	1432	1479
Silver Sensation	1383	1786	-	-	1911
Spring Gold	1892	1727	1681	1262	-
Spring White	-	1805	-	-	-
Sprite	-	1873	1748	-	-
Sugar Daddy	1095	-	-	-	-
Sugar Dots	-	-	-	759	-
Sugar Loaf	-	-	-	1632	1652
Sunchief	-	-	-	1552	-
Sundance	1834	1707	1738	-	-
Sweet Sue	-	1659	-	1115	1623
Tendersweet	-	1200	-	-	-
Top Style	1344	-	-	-	-
Tri-Gold	-	1913	-	-	-
Triumphant	1316	1756	-	-	-
Victory	1296	-	-	-	-
W 9625	-	-	-	-	2055
WH 115	-	-	-	-	1642
WH 1235	-	-	-	-	1258
White Delight	-	-	-	1306	-
Yukon	1508	1717	1469	-	-
YW 1465	-	-	-	-	1728
70-2070	-	-	-	1056	1604

This page intentionally blank.